Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Original) A method for identifying a candidate molecule as having activity as an inhibitor of Hsp90 comprising the steps of:

(a) combining the candidate molecule with Hsp90 in the presence of a fluorescently-labeled molecule known to bind to Hsp90;

(b) exciting the fluorescently-labeled molecule using polarized light to produce a fluorescent emission;

(c) observing the degree of polarization of the fluorescent emission; and

(d) comparing the degree of polarization determined in step (c) to a standard value determined for the fluorescently labeled molecule when it is bound to Hsp90, wherein a decrease in the degree of polarization relative to the standard indicates that the fluorescently labeled molecule has been wholly or partially displaced by the candidate molecule, and identifies the molecule as having activity as an inhibitor of Hsp90.

2. (Original) The method of claim 1, wherein the Hsp90 is provided in the form of a cell lysate.

3. (currently amended) The method of claim 1, wherein the candidate molecule is further tested , if the molecule ~~it~~ is identified ~~the molecule~~ as having activity as an inhibitor of Hsp90, by a second assay comprising the steps of:.

(a) adding the candidate molecule to a population of test cells, wherein said test cells exhibit an Hsp90-dependent activity in the absence of the candidate compound;

(b) incubating the cells for a period of time sufficient to permit growth of the cells and exhibit the Hsp90-dependent activity in the absence of an effective inhibitor;

(c) determining the amount of the Hsp90-dependent activity; and

(d) comparing the determined amount of Hsp90-dependent activity to a standard value determined for the test cells in the absence of an effective inhibitor, wherein a determined value of the Hsp90-dependent activity that is lower than the standard value by a statistically significant amount is indicative that the candidate molecule has activity as an *in vivo* inhibitor of Hsp90.

4. (Original) The method of claim 3, wherein the test cells are tumor cells.

5. (Original) The method of claim 4, wherein the test cells are selected from the group consisting of breast cancer cells, glioblastoma cells, neuroblastoma cells, vulvar cancer cells, small cell lung cancer cells, prostate cancer cells, acute myeloid leukemia cells, acute promyelocytic leukemia cells, chronic myeloid leukemia cells, colon cancer cells, non-small cell lung cancer cells, melanoma cells, and pancreatic cancer cells.

6. (Original) The method of claim 3, wherein in the second assay the candidate molecule is added to a plurality of populations of different cell type, wherein the different cell types have at least partially different Hsp90-dependent activity.

7. (currently amended) The method of claim 6, wherein the different cell types include ~~includes~~ cells selected from the group consisting of high Her2 driven cells; Raf-MAPK driven cells; PTEN-defective cells with high Akt levels/activity; and Rb-defective cells.

8. (previously presented) The method of claim 6, wherein the different cell types include two or more cell types selected from the group consisting of

(1) SKBr3 breast cancer cells;

(2) MCF7 breast cancer cells;

(3) U87 glioblastoma cells; and

(4) MBA-MD-468 breast cancer cells.

9. (previously presented) The method of claim 1, wherein the fluorescently-labeled molecule is a labeled geldanamycin labeled at the C17 position.

10. (previously presented) The method of claims 1, wherein the Hsp90 is Hsp90 alpha.

11. (previously presented) The method of claims 1, wherein the Hsp90 is Hsp90 beta.

12. (previously presented) The method of claim 1, wherein the Hsp90 is grp94.

13. (previously presented) The method of claims 1, wherein the Hsp90 is trap1.

14. (previously presented) The method of claim1, wherein the fluorescently-labeled molecule comprises a FITC label.

15. (previously presented) The method of claim1, wherein the fluorescently-labeled molecule comprises a BODIPY label.

16. (previously presented) The method of claim 1, wherein the fluorescently-labeled molecule comprises a red-shifted BODIPY label.

17. (previously presented) The method of claims 1, wherein the amount of fluorescently-labeled molecule is such that the degree of polarization observed in the absence of the candidate molecule is substantially independent of the amount of Hsp90 present.

18. (withdrawn) A method for identifying a candidate molecule as having activity as an inhibitor of Hsp90, comprising the steps of

(a) adding the candidate molecule to a population of test cells, wherein said test cells exhibit an Hsp90-dependent activity in the absence of the candidate compound;

(b) incubating the cells for a period of time sufficient to permit growth of the cells and exhibit the Hsp90-dependent activity in the absence of an effective inhibitor;

(c) determining the amount of the Hsp90-dependent activity; and

(d) comparing the determined amount of Hsp90-dependent activity to a standard value determined for the test cells in the absence of an effective inhibitor, wherein a determined value of the Hsp90-dependent activity that is lower than the standard value by a statistically significant amount is indicative that the candidate molecule has activity as an *in vivo* inhibitor of Hsp90.

19. (withdrawn) The method of claim 18, wherein the test cells are tumor cells.

20. (withdrawn) The method of claim 19, wherein the test cells are selected from the group consisting of breast cancer cells, glioblastoma cells, neuroblastoma cells, vulvar cancer cells, small cell lung cancer cells, prostate cancer cells, acute myeloid leukemia cells, acute

promyelocytic leukemia cells, chronic myeloid leukemia cells, colon cancer cells, non-small cell lung cancer cells, melanoma cells, and pancreatic cancer cells.

21. (withdrawn) The method of claim 18, wherein a second assay is performed in which the candidate molecule is added to a plurality of populations of different cell type, wherein the different cell types have at least partially different Hsp90-dependent activity.

22. (withdrawn) The method of claim 21, wherein the different cell types includes cells selected from the group consisting of high Her2 driven cells; Raf-MAPK driven cells; PTEN-defective cells with high Akt levels/activity; and Rb-defective cells.

23. (withdrawn) The method of claim 21, wherein the different cell types include two or more cell types selected from the group consisting of

(1) SKBr3 breast cancer cells;

(2) MCF7 breast cancer cells;

(3) U87 glioblastoma cells; and

(4) MBA-MD-468 breast cancer cells.

24. (withdrawn) A compound comprising

(a) a binding moiety; and

(b) a fluorescent moiety;

wherein the compound binds, via the binding moiety to Hsp90, and the fluorescent moiety has polarized fluorescence when the compound is bound to Hsp90, and fluorescence with a lesser degree of polarization when the compound is not bound to Hsp90.

25. (withdrawn) A compound according to claim 22, wherein the fluorescent moiety is a BODIPY.

26. (withdrawn) The compound according to claim 22, wherein the fluorescent moiety is a red-shifted BODIPY.

27. (withdrawn) The compound according to claim 22, wherein the fluorescent moiety is FITC.

28. (withdrawn) The compound according to claim 22, wherein the binding moiety is geldanamycin.

29. (withdrawn) The compound according to claim 22, having the structure: GM-BODIPY

30. (withdrawn) The compound according to claim 22, having the structure: GM-BODIPY-TMR

31. (withdrawn) The compound according to claim 22, having the structure: GM-FITC

32. (currently amended) A method of claim 1, wherein the fluorescently-labeled molecule comprises a binding moiety and a fluorescent moiety, and wherein the molecule binds via the binding moiety to Hsp90, and the fluorescent moiety has polarized fluorescence when the compound is bound to Hsp90, and fluorescence with a lesser degree of polarization when the compound is not bound to Hsp90.

33. (previously presented) A method according to claim 32, wherein the fluorescent moiety is a BODIPY.

34. (previously presented) A method according to claim 32, wherein the fluorescent moiety is a red shifted BODIPY.

35. (previously presented) A method according to claim 32, wherein the fluorescent moiety is FITC.

36. (previously presented) A method according to any of claim 32, wherein the binding moiety is geldanamycin.

37. (previously presented) A method according to claim 1, wherein the fluorescently-labeled molecule is GM-FITC.

38. (previously presented) A method according to claim 3, wherein the fluorescently-labeled molecule is GM-FITC.

39. (withdrawn) A method according to claim 18, wherein the fluorescently-labeled molecule is GM-FITC.

40. (withdrawn) A method according to claim 21, wherein the fluorescently-labeled molecule is GM-FITC.

41. (new) A method according to claim 2, wherein in step (a) the candidate molecule, Hsp 90 and the fluorescently-labeled molecule known to bind to Hsp90 are combined in the presence of dithiothreitol (DTT).

42. (new) A method according to claim 1, wherein in step (a) the candidate molecule, Hsp 90 and the fluorescently-labeled molecule known to bind to Hsp90 are combined in the presence of dithiothreitol (DTT).